REMARKS

Attached hereto are the requested copies of Table 1 and Table 2. Reference to Table 3 has been cancelled from the specification as above. **No new matter has been added.** Entry and allowance of all the claims (pointed out in the Response filed June 9, 2005) are requested.

Since Applicant has presented a novel, unique and non-obvious invention, reinstatement and allowance of all the claims are respectfully requested.

Respectfully,

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August 22, 2005

TIC: 6201003.D

Coal Pyrolysis liquids 30m DB5-0.25μm 250μm

Peak#	Ret Time	Type	Width	Area	Start Time	End Time	
1	3.222	BB	0.048	30393316	3.171	3.361	
2	14.154	BB	0.076	313283607	13.912	14.317	-Phenol
3	16.767	BV	0.062	226782918	16.512	16.852	o-cresol
4	17.528	BV	0.099	645315429	17.192	17.740	-p-cresol
5	18.514	VB	0.069	48860748	18.440	18.701	
6	19.588	BV	0.082	59120967	19.406	19.753	-dimethylphenol (C_2
7	19.936	PV	0.098	322802782	19.753	20.065	-2,4 dimethylphen
8	20.590	BB	0.104	331638422	20.341	20.739	-2,6 dimethylphen
9	20.873	BB	0.060	36879860	20.772	20.948	C_2 phenol
10	21.099	BV	0.059	33990136	21.040	21.184	naphthalene
11	21.356	PV	0.077	90845735	21.184	21.417	C_2 phenol
12	21.527	VV	0.151	136310629	21.417	21.668	dihydroxy benzen
13	22.439	BV	0.076	64112416	22.333	22.510	C_3 phenol
14	22.758	PV	0.062	68611382	22.634	22.829	C_3 phenol
15	23.412	BV	0.138	240115887	23.019	23.553	?
16	23.646	VV	0.079	47741586	23.553	23.712	
17	24.320	VV	0.170	207909906	24.069	24.458	methy catecol
18	24.538	VV	0.076	79325325	24.458	24.605	methyl naphthalene
19	24.653	VV	0.055	38565908	24.605	24.742	n-C_{13}
20	25.046	PV	0.125	118270515	24.742	25.117	methyl naphthale
21	25.793	PV	0.094	59603420	25.659	25.871	?
22	26.991	BV	0.147	111756150	26.665	27.083	C_2 catecol
23	27.478	VV	0.071	74153041	27.310	27.554	nC_{14}
24	28.217	VV	0.155	111996448	28.057	28.318	?
25	29.150	PB	0.126	79288182	28.893	29.272	hydrocarbon
26	30.134	VV	0.066	71278688	29.984	30.291	n-C_{15} 212
27	30.411	PV	0.092	38697487	30.291	30.500	-C_3 n-thalene
28	32.644	VV	0.067	70995925	32.585	32.800	n-C_{16} 226
29	33.055	VV	0.131	89973356	32.800	33.126	methy naphthol
30	33.815	PV	0.146	99261970	33.420	33.917	?
31	35.017	BV	0.076	72696374	34.649	35.080	hydrocarbon - ole 240
32	35.165	VV	0.068	58509299	35.080	35.250	hydrocarbon-ole 238
33	35.991	PB	0.126	66195337	35.818	36.125	
34	37.268	VV	0.077	49827041	37.184	37.419	hydrocarbon ole
35	38.913	PV	0.096	44028359	38.654	38.954	hydrocarbon mi
36	39.013	VV	0.083	65757311	38.954	39.111	
37	39.243	VV	0.108	41825527	39.111	39.323	hydrocarbon-mi
38	39.407	VV	0.078	31700091	39.323	39.464	
39	39.576	VV	0.206	82404413	39.464	39.804	
40	40.336	VV	0.076	99687158	40.176	40.503	hydrocarbon
41	40.790	PV	0.125	67313401	40.614	40.882	
42	40.949	VV	0.094	50579033	40.882	41.001	
43	41.074	VV	0.100	52058420	41.001	41.130	
44	41.411	VV	0.075	94054622	41.305	41.535	
45	42.054	PV	0.189	136427968	41.639	42.185	-hc
46	42.324	VB	0.085	94923542	42.185	42.528	
47	43.116	VV	0.090	163284484	42.861	43.181	-hc
48	43.301	VV	0.114	64892843	43.181	43.410	
49	43.630	PV	0.115	37686533	43.410	43.684	
50	43.830	VV	0.078	137793990	43.684	43.939	-hc
51	43.996	VV	0.084	32775013	43.939	44.036	
52	44.107	VV	0.097	48161669	44.036	44.164	
53	44.260	VV	0.084	54499174	44.164	44.318	
54	44.481	VV	0.065	114007997	44.318	44.560	-hc
55	44.871	VV	0.095	46641140	44.795	44.966	
56	45.083	VV	0.050	74068060	44.966	45.161	

Table 1 Identification of the molecular species shown in the chromatogram of Fig. 8. (Courtesy of NREL)

Table 2 NREL Analysis of Gas Sample from Flask No. 3 of Glass System Pyrolysis Test No. 5 of 9-6-96

Analysis Made with MTI Gas Chromatograph by Bob Evans 303 384 5284

Gas	Percent	ppm	Vapor Press. mm Hg @	°C
N_2	90	900,000		
CH_4	3.5	35,000		
H_2	1.8	18,000		
CO	0.4	4,000		
CO_2	1.7	17,000		
Ethane	0.7	7,000	600	-94
Ethylene	0.2	2,000		
Propane	0.2	2,000	600	-48
Propylene	0.16	1,600		
n Butane	0.09	900	900	3.8
1 Butene	0.03	300		
iso Butene	0.02	200		
cis2 Butene	0.03	300		
trans 2 Butene	0.06	600		
n Pentane	0.05	500	200	2
iso Pentane	0.01	100	200	-5

Note that the above table indicates that any hydrocarbons with vapor pressures less than 200 mm Hg @ 0°C would have condensed out of the pyrolysis gas at the ice-water bath temperature, hence would have been present in the off-gas collection flask in concentrations below about 100 ppm. Thus compounds as volatile as pentane were probably present in the liquid product. The analysis of the liquid should show this.